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February 19, 2013

TO: Each Health Deputy

FROM: Jonathan E. Fielding, M.D., M.P.H.
Director and Health Officer

SUBJECT: **ADVANCED COPY: *"How Social and Economic Factors Affect Health. Social Determinants of Health, Issue no.1"***

Please find enclosed our report *How Social and Economic Factors Affect Health. Social Determinants of Health, Issue no.1.* This report is first in a series which discusses how community-level social and economic conditions influence health. The report compares socioeconomic indicators for 117 cities and communities within Los Angeles County. It will be posted to the Department of Public Health website (http://www.publichealth.lacounty.gov/epi/) and released to the public within the next few weeks.

We hope that you will find it useful and informative. If you have any questions, please let me know, or you may contact Margaret Shih, M.D., Ph.D., of the Office of Health Assessment and Epidemiology at (213) 240-7785.

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Enclosure

c. Public Health Program Directors
Public Health Commission

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Social Determinants of Health

# How Social and Economic Factors Affect Health

January 2013

County of Los Angeles Public Health

# Our Social Environment

Health and health problems result from a complex interplay of a number of forces. An individual's health-related behaviors (particularly diet, exercise and smoking), surrounding physical environments, and health care (both access and quality), all contribute significantly to how long and how well we live. However, none of these factors is as important to population health as are the social and economic environments in which we live, learn, work, and play. We refer to these factors collectively as the "social determinants of health."

This report (first in a series) focuses particularly on the "social environment," defined as the combination of social and cultural institutions, norms, patterns, beliefs, and processes that influence the life of an individual or community.[1] Included are two eye-opening scenarios ("One Path" and "A Better Path") to illustrate how social determinants of health can greatly affect the lives of individuals. In addition, a series of recommendations introduce ways to move forward in realizing our vision of "Healthy people in healthy communities."

## How Do Social Determinants Affect Health?

Social determinants play a crucial role in the health of each individual in Los Angeles County as well as collectively in our community. Inequities in the structure of societal resources vary and can be striking. Such inequities can mean the difference between life or death, or a life filled with vigor and good health or one plagued with chronic disease and poor health.

Education level, employment, income, family and social support, and community safety are all components of social and economic determinants of health. For a glimpse of how these complex factors can influence a person's daily life, read the following scenario:

### One Path

A low birth weight infant is born. Why? He was born 10 weeks early, weighing two pounds. His teenage mother grew up in a family where high-fat meals with few fruits and vegetables were the norm and in a family situation marked by violence and substance use. She did not have access to family planning services, and hers was an unplanned pregnancy. At the time, she worked for minimum wage in a neighborhood fast-food restaurant in a locality that did not have a "no-smoking" ordinance in effect, and although not a smoker herself, she had extensive exposure to secondhand smoke. Her employer, a small business owner, did not provide health insurance but did provide his employees with no-cost meals on both ends of their shifts.

When her over-the-counter pregnancy test was positive, she tried to find a health care provider who would see her, but there was no obstetrical care available in her immediate community, and the closest facility that took care of uninsured women was located some distance away. She did not have a car, and there was no public transportation in her neighborhood. She knew she needed to provide additional nourishment for her fetus, so she began to eat larger amounts of the high-saturated fat, high-salt foods that were available at her job.

Even if she had been able to access prenatal care, she might have had difficulty. Her neighborhood had no place where fresh fruits and vegetables were available. Her street had no sidewalks and poor walkability. Without nearby parks or recreational facilities, regular exercise was not easily accessible. And she needed her job, so exposure to secondhand smoke would not have diminished.

Nevertheless, had she entered the medical care system earlier, her pregnancy-related hypertension would have been identified and controlled. Instead, at 29 weeks of pregnancy, she developed a severe headache and visual problems, and she was rushed by taxi to the regional hospital where she was diagnosed with severe pre-eclampsia. When her blood pressure could not be adequately controlled, an emergency team delivered her premature son. His immature lungs were supported for several weeks by a ventilator in the neonatal intensive care unit and eventually he was sent home, with significant cognitive deficits. The stressed educational system was unable to provide the individual educational support needed and at 15, he dropped out of high school.

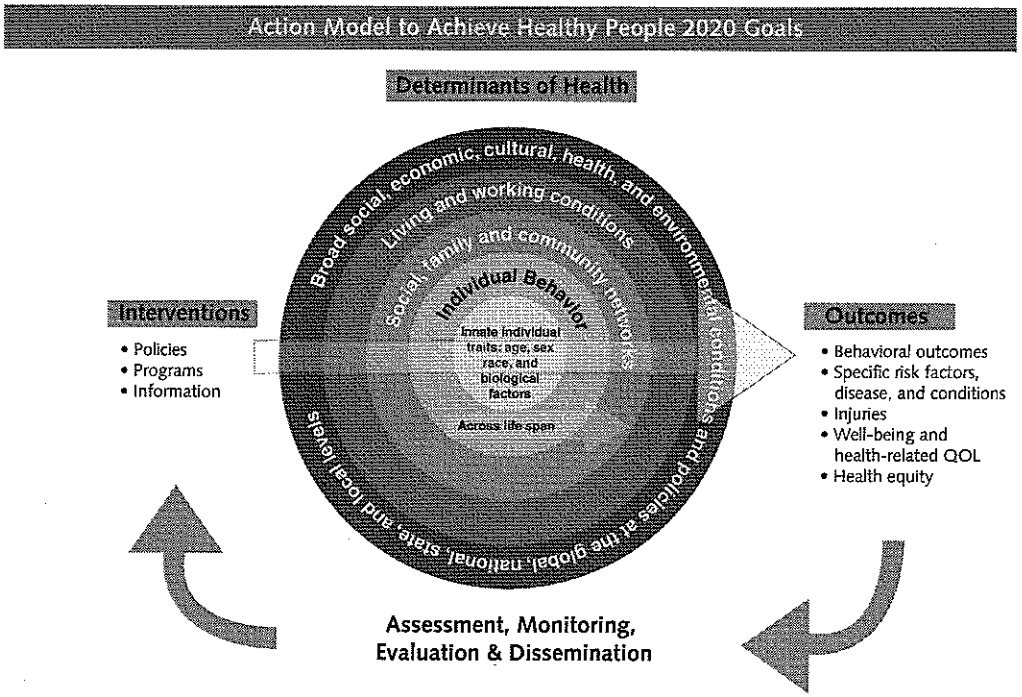
# What Determines Health

While the previous scenario is fictional, unfortunately it is all too plausible. The U.S., despite spending far more on medical care than any other country in the world, has poorer health outcomes than most other developed countries. The U.S. ranks 34th among the world's nations in infant mortality.[2]

It is possible, however, to envision a different and more promising ending to this story if a number of changes were made in how our society understands and promotes the basis of health. In contrast to "One Path" above, read "A Better Path" on page 19, to see how social and economic determinants of health can positively affect the health and longevity of Los Angeles County Residents.

Models or "logic models," though necessarily approximate and oversimplified, can help us think about this complex interplay of factors and where we might take action to improve population health. The diagram below, (Figure 1) from the effort to develop a new framework of health goals for the nation, "Healthy People 2020," is one such model and is referred to as the ecologic or social-ecologic model of health.[1]

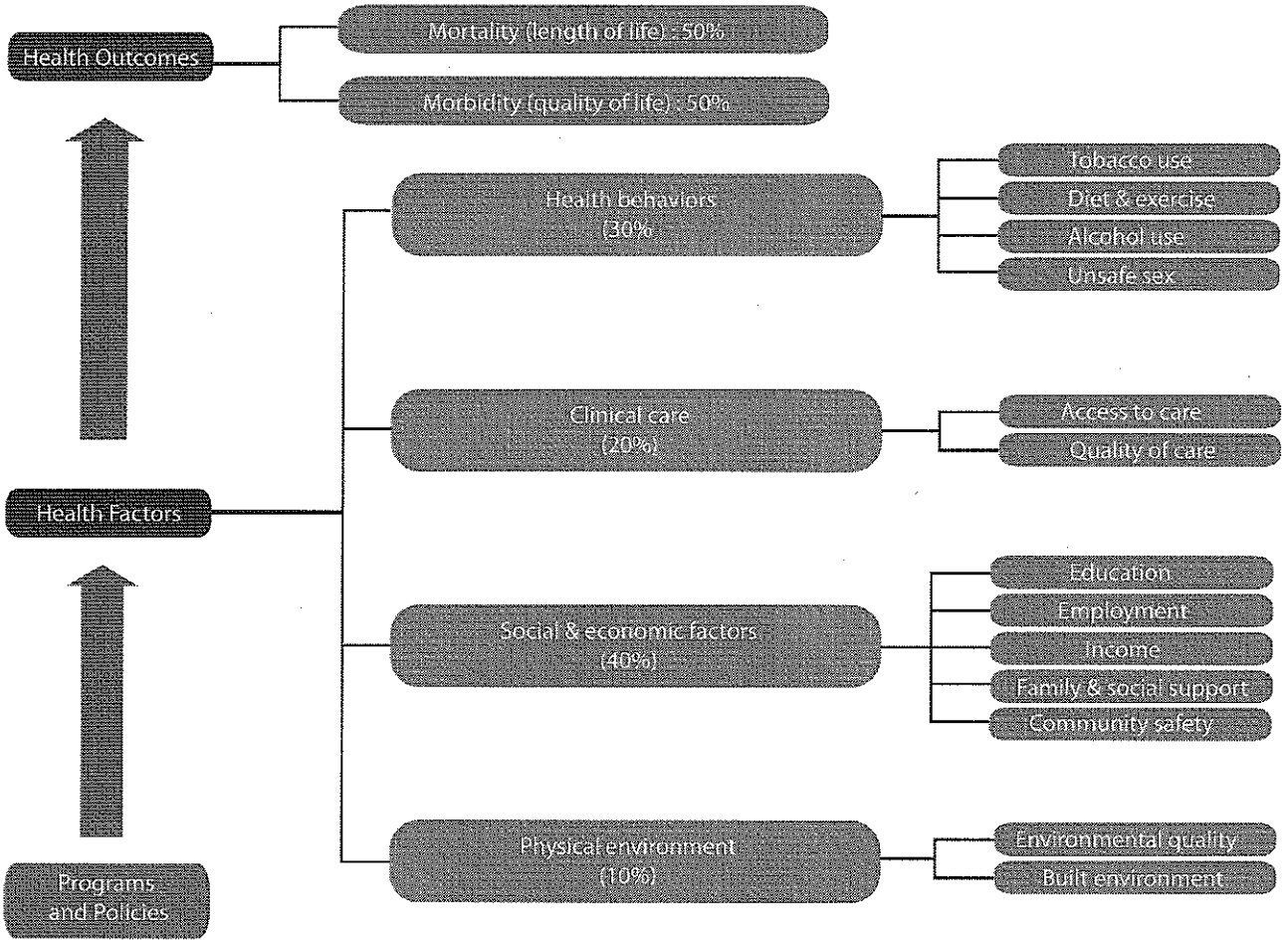
**Figure 1.**




It is important to note that this model includes a time dimension reflecting the impact of these factors not just at any given point but across the entire course of a lifetime, or "the life course." Research shows, for example, that poverty in childhood has long-lasting effects limiting life expectancy and worsening health for the rest of the child's life, even if social conditions subsequently improve.[3] At the same time, health-promoting social environments can enhance health status and health outcomes at any point across the life course.

In the course of its history, public health has focused on what was believed to be the most important source of mortality, disease, injury, and disability. In the late 19th and early 20th centuries, public health concentrated particularly on the physical environment. Improvements in, for example, clean water supplies, healthier housing, sanitation, workplace safety, and safe food led to sharp increases in average life expectancy.[4,5] The later decades of the 20th century concentrated on expanded access to medical care, resulting in further expansion of life years, particularly life expectancy once one reaches age 65.[6] In recent decades, research has increasingly shown how powerfully social and economic conditions determine population health and differences in health among subgroups, much more so than medical care.[7]

## Figure 2. County Health Rankings Model



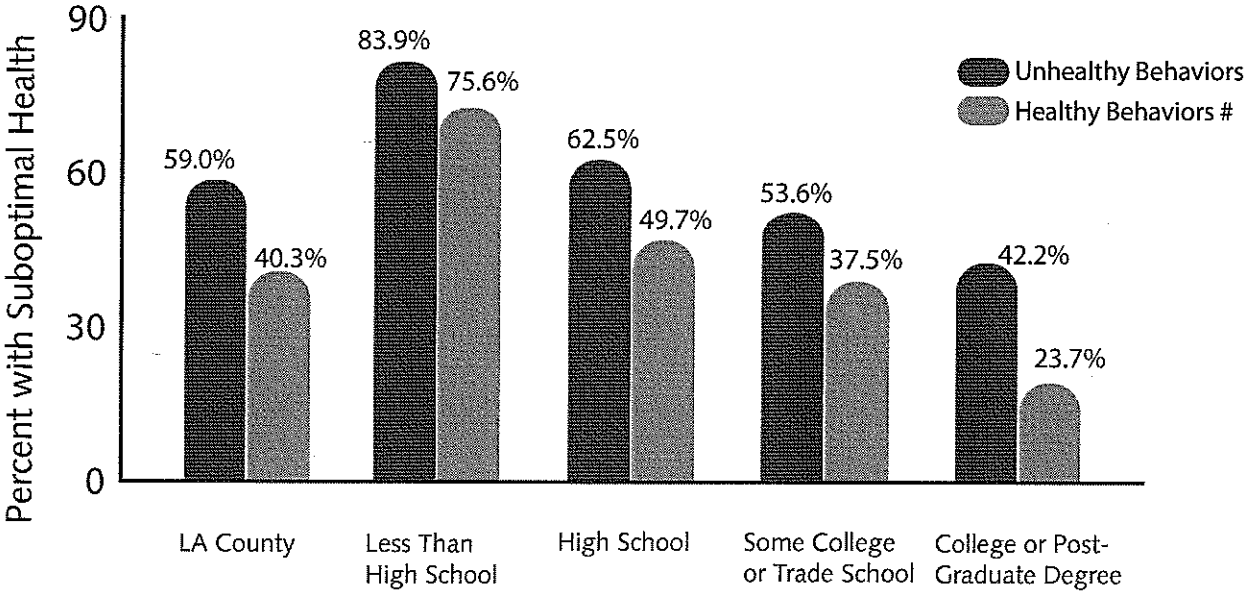

Adapted with permission from www.countyhealthrankings.org/our-approach.

How much do the different broad determinants of health contribute? One thoughtful recent effort, combining the best recent research and analysis, is presented in Figure 2.[8,9] A population's health is shaped 10% by the physical environment, 20% by clinical health care (access and quality), 30% by health behaviors (themselves largely determined by social and physical environments), and 40% by social and economic factors. The specific indicators used by the County Health Rankings for each of these four domains are shown in the right column.

The social and economic factors are not only the largest single predictor or driver of health outcomes, but also strongly influence health behaviors, the second greatest contributor to health and longevity. The lower the social and economic position of a population or community, the more common are unhealthy behaviors and the more difficult it is to practice healthy ones. Conversely, the better the social environment, the more possible and likely it is to adopt and sustain healthier behaviors.

Chart 1 illustrates how education and health behaviors interact to impact health outcomes.[10] Being in less than very good health is the health benchmark (50.9% of LA County residents and 45.2% of U.S. residents report that they are in less than very good health). Health behaviors (physical inactivity and smoking) were associated with a smaller difference in health status at the lower educational levels, perhaps because lower education status itself was a much more important contributor to health than the health behaviors.

**Chart 1. Percent of Adults Reporting Suboptimal Health by Education Level and Participation in Healthy vs. Unhealthy Behaviors, Los Angeles County, 2007**




#Healthy Behaviors= non-smoker & meets physical activity guidelines
Results are age-adjusted to 2000 US Standard Population. Self-reported health status: Suboptimal is poor, fair or good. Includes adults age 25-74 years. Source: Los Angeles County Health Survey, 2007.

This chart also illustrates that higher levels of education are not only associated with better health, but that in general, higher educational attainment is correlated with better health at each step along the ladder or continuum, controlling for behaviors. The same graduated relationship holds for the other major social determinants, such as income and employment. This phenomenon is called the social gradient of health.

## What's in This Report (and What's Not)

This report gives a snapshot of how a few key social environment indicators vary by city and community across Los Angeles County. Comparisons are made by standard demographic categories as well by comparing how the County is doing relative to California and the nation. The selected indicators include some of the most powerful predictors of health: education, income/poverty, housing burden and economic hardship overall. There are other important social indicators as well, including those related to employment and working conditions; community cohesiveness, social support and civic engagement; community safety; and legal and social equity. Standard, consistent measures for some of these domains, such as those related to social cohesion and justice, are unfortunately not yet available across LA County communities. Others are highly variable, as with unemployment, and current values could be misleading. Still others, such as a fuller exploration of housing and of food security, will be subjects of future reports.

Examples of how these complex problems have begun to be tackled by public and private organizations are included. The are primarily intended to be illustrative of the kinds of actions that can be taken.

## How This Information Can Be Used

Together with recent and forthcoming reports on various risks, health status, and outcomes, this report brings focus to the considerable gaps and disparities in the social environment that largely determines differences in average health status from city to city across LA County. This, in turn, emphasizes that overall health cannot be substantially improved and disparities reduced without more comprehensively and directly ad-

dressing these "upstream" determinants. Individual cities and communities as well as Countywide agencies and organizations can use these data as a starting point for examining the reasons behind these disparities, setting achievable goals for improved health for all residents, and taking appropriate action.

# Study Methods

## Selecting Indicators

Analysts in the LA County Department of Public Health conducted a comprehensive review of the literature and available databases for social determinants indicators that met key criteria: strong evidence for correlation with health status and outcomes; statistically valid and reliable; representative of the County's entire population; and sufficiently detailed to allow geographic and demographic breakdown. While the measures presented in this report are clearly critical ones, other promising indicators could not be included because a measure and data source that presently met the above criteria could not be identified.

One broad measure used below is the Economic Hardship Index (EHI),[11] which is itself a combination of six indicators:

1. Crowded housing (percentage of occupied housing units with more than one person per room)
2. Percent of persons living below the federal poverty level
3. Percent of persons over the age of 16 years who are unemployed
4. Percent of persons over the age of 25 years without a high-school education
5. Dependency (percentage of the population under 18 or over 64 years)
6. Per capita income

Each component is equally weighted and standardized across all cities/communities. The index can range from 1 to 100, with a higher index representing a greater level of economic hardship. The 117 cities and communities were ranked by economic hardship, with 1 being the least level of economic hardship and 117 being the greatest.

Additionally, city/community data are presented for the following individual indicators:

1. Percent of persons over the age of 25 without a high-school diploma or its equivalent (the same as one of the EHI components, but highlighted separately as well)
2. Housing burden (percentage of households spending more than 30% of their income on housing)
3. Median household income
4. Percent of people living in households with an income of less than 200% of the federal poverty level. In 2009, this level amounted to an annual income of $21,660 for one person or $44,100 for a household of 4 persons, and it approximates the income needed for a household in LA County to meet its basic costs without public assistance or subsidy, known as the "Self-Sufficiency Standard."[12]

These four indicators expand the information yielded by the EHI. Each city/community is ranked for each of these indicators, with 1 meaning, respectively, the smallest percentage of persons without a high school diploma, lowest housing burden, highest median household income and highest percentage of households meeting the Self-Sufficiency Standard (i.e. lowest percentage below 200% of the Federal Poverty Level).

## Data Sources

The data come from the U.S. Census Bureau's 2005-2009 5-Year American Community Survey (ACS). The ACS is an ongoing survey that provides data every year to help communities, state governments and federal agencies plan investments and services. Using combined five-year results allow the comparison across 117 different incorporated cities, Los Angeles city council districts and unincorporated communities in LA County.

# Findings

## Education

Among all residents of Los Angeles County in 2005-2009 who were more than 25 years of age, 24.5% have less than a high-school education (Table 1). This proportion is significantly greater than in the United States as a whole (15.4%) and greater than the statewide proportion for California (19.5%).[13] The lack of a completed high-school education could be considered a "cumulative or final dropout rate." School dropout rates are inconsistently measured and reported, but this census-based measure shows how many individuals by age 25 do not have a high-school diploma or its equivalent; i.e. dropped out at some point and never went back to finish.


## Housing

Over half (50.7%) of households in LA County are classified as "housing-cost burdened," meaning that more than 30% of income must be devoted to housing. This measure combines both renters and homeowners, each representing about half the County's households. The limit of 30% of gross income for acceptable housing costs has been used for several decades in both rental subsidy programs and in the granting of federally guaranteed mortgages. This level of housing burden is the second highest in the nation among major metropolitan areas, after Miami, for both renters and homeowners considered separately.[14]

### Examples of Communities Taking Action

**Shasta County, CA**

The county Health and Human Services Agency, Public Health, decided to address the county's rank as the second least healthy county in the state by focusing on the strong link between education and health and, specifically, the county's low proportion of residents with a college education. The public health agency is assigned the lead in the Shasta County College and Career Readiness Initiative, a collaboration among the Health and Human Services Agency, the county Office of Education and College OPTIONS – itself a public-private partnership among higher educational institutions, local school districts and local philanthropies. The project is training school leaders, counselors and parents to help get middle and high school students ready for college, and making structural changes in college policies and financial aid that will facilitate increased enrollment.[15]

## Income and Poverty

The median household income in LA County for 2005-2009 (in 2009 inflation-adjusted dollars) was $54,828. This is somewhat higher than for the U.S. as a whole, $51,425, but lower than the statewide median for California, $60,392.

The proportion of LA County residents living in households with incomes below twice the national poverty level (200% Federal Poverty Level or FPL) is 37.3%. The proportion of LA County individuals below the FPL, which is uniform across the nation regardless of local cost of living, is 15.4%, compared with 13.5% for the nation and 13.2% for California. When adjusted for cost of living, Los Angeles County's poverty rate is 26%, higher than any other county in California.[16] Furthermore, the poverty rate in Los Angeles County is not decreasing and is nearly twice as high as it was in 1969.

## Economic Hardship

The Economic Hardship Index (EHI) ranges from a low of 12.6 in Hermosa Beach to a high of 83.8 in Los Angeles City Council District 9 and is presented both in the main table (Table 1) and as a map of the cities and communities (Map 1).

### Examples of Communities Taking Action

**City of Richmond, CA**

Recognizing that the intersection of violent crime, unemployment and "revolving-door" incarceration negatively affect the overall health of the community, the City of Richmond and community partners obtained funding for the Safe Return Re-Entry Project. Richmond stands out as an area receiving disproportionately high numbers of people returning from prison. Upon release, former inmates grapple with a variety of urgent needs, from getting a new ID to finding a living wage job to safe, affordable housing. These needs are largely unmet, contributing to Richmond being regularly ranked among the areas with the highest violent crime and recidivism rates. The project aims to improve community health and safety by improving the current system for reintegrating former inmates into the Richmond community, using policy research and advocacy to establish a one-stop referral center for people returning from prison, increase the amount of accessible medium-term housing and revise the personnel and contracting policies to level the playing field for applicants with past convictions. The city and state are active partners in a collaboration led by a faith-based community organization and a nonprofit research and policy institute that applies science-based solutions to economic development and social equity issues.[17]

## Table 1. Key Social and Economic Indicators, by City and Community, ranked by Hardship. Los Angeles County, 2005-2009

| City/Community | <HS Education | | Housing Burden | | MHI | | <200% FPL | | Hardship | |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | Rank | % | Rank | $ | Rank | % | Rank | Index | Rank |
| Los Angeles County | 24.5% | – | 49.4% | – | $54,828 | – | 37.3% | – | – | – |
| Los Angeles City | 26.9% | – | 55.2% | – | $48,750 | – | 53.6% | – | – | – |
| Hermosa Beach | 1.4% | 1 | 41.5% | 15 | $99,446 | 10 | 12.0% | 10 | 12.6 | 1 |
| Palos Verdes Estates | 2.9% | 7 | 33.3% | 1 | $170,068 | 1 | 3.4% | 1 | 18.1 | 2 |
| Malibu | 5.1% | 16 | 45.1% | 36 | $122,045 | 5 | 12.6% | 11 | 19.4 | 3 |
| Redondo Beach | 3.9% | 12 | 41.1% | 12 | $92,365 | 11 | 14.1% | 14 | 19.9 | 4 |
| Manhattan Beach | 2.0% | 3 | 37.1% | 3 | $126,650 | 4 | 8.4% | 5 | 20.2 | 5 |
| San Marino | 1.4% | 2 | 39.5% | 4 | $160,481 | 2 | 6.6% | 3 | 21.2 | 6 |
| El Segundo | 3.8% | 11 | 42.8% | 19 | $87,630 | 14 | 11.6% | 8 | 21.7 | 7 |
| La Cañada Flintridge | 2.7% | 6 | 40.0% | 7 | $150,357 | 3 | 7.2% | 4 | 22.5 | 8 |
| Santa Monica | 5.4% | 17 | 46.6% | 50 | $67,062 | 43 | 23.1% | 38 | 24.3 | 9 |
| Agoura Hills | 3.7% | 10 | 43.1% | 22 | $110,257 | 8 | 5.6% | 2 | 25.2 | 10 |
| Sierra Madre | 2.5% | 5 | 43.3% | 25 | $83,652 | 19 | 13.7% | 13 | 26.0 | 11 |
| LA City Council District 5 | 5.4% | 18 | 48.9% | 65 | $91,737 | 12 | 21.9% | 35 | 26.1 | 12 |
| West Hollywood | 4.4% | 14 | 55.1% | 95 | $49,494 | 86 | 30.3% | 56 | 26.4 | 13 |
| LA City Council District 11 | 8.1% | 28 | 46.5% | 49 | $86,172 | 17 | 21.1% | 33 | 27.0 | 14 |
| Calabasas | 2.4% | 4 | 52.7% | 86 | $116,761 | 6 | 9.7% | 7 | 27.6 | 15 |
| South Pasadena | 4.2% | 13 | 40.3% | 10 | $80,412 | 24 | 15.8% | 18 | 27.6 | 16 |
| Walnut | 7.5% | 20 | 40.0% | 8 | $100,691 | 9 | 14.8% | 15 | 27.9 | 17 |
| Beverly Hills | 4.7% | 15 | 56.7% | 104 | $81,726 | 23 | 18.0% | 26 | 27.9 | 18 |
| Rancho Palos Verdes | 3.4% | 9 | 39.8% | 5 | $112,016 | 7 | 9.0% | 6 | 28.3 | 19 |
| Diamond Bar | 8.0% | 27 | 45.4% | 38 | $89,185 | 13 | 11.9% | 9 | 28.5 | 20 |
| Claremont | 6.9% | 19 | 41.7% | 16 | $85,560 | 18 | 15.6% | 17 | 29.3 | 21 |
| Culver City | 10.2% | 29 | 44.6% | 35 | $71,978 | 34 | 18.9% | 28 | 30.5 | 22 |
| La Crescenta-Montrose | 7.8% | 23 | 46.3% | 47 | $82,998 | 20 | 14.9% | 16 | 31.0 | 23 |
| San Dimas | 7.9% | 24 | 42.2% | 17 | $71,277 | 35 | 17.4% | 23 | 31.2 | 24 |
| Arcadia | 7.9% | 25 | 43.2% | 24 | $78,273 | 26 | 17.9% | 25 | 31.2 | 25 |
| View Park-Windsor Hills | 3.3% | 8 | 40.0% | 9 | $87,049 | 15 | 13.1% | 12 | 31.3 | 26 |
| Torrance | 7.7% | 22 | 44.1% | 31 | $73,606 | 33 | 16.2% | 20 | 31.6 | 27 |
| Cerritos | 7.5% | 21 | 40.5% | 11 | $86,497 | 16 | 15.8% | 19 | 32.8 | 28 |
| Lomita | 12.1% | 33 | 39.9% | 6 | $66,496 | 46 | 24.2% | 42 | 33.1 | 29 |
| Glendora | 11.6% | 32 | 44.6% | 32 | $75,328 | 30 | 18.0% | 27 | 34.5 | 30 |
| Lakewood | 11.0% | 31 | 41.4% | 14 | $76,348 | 28 | 17.0% | 21 | 34.7 | 31 |
| Signal Hill | 7.9% | 26 | 49.7% | 69 | $69,353 | 38 | 24.1% | 41 | 34.9 | 32 |
| Burbank | 12.7% | 34 | 49.7% | 70 | $62,255 | 55 | 22.8% | 37 | 35.3 | 33 |
| LA City Council District 4 | 12.8% | 36 | 46.6% | 51 | $56,545 | 65 | 33.3% | 66 | 36.7 | 34 |
| LA City Council District 12 | 13.5% | 38 | 48.2% | 57 | $77,728 | 27 | 24.0% | 40 | 36.9 | 35 |
| Hacienda Heights | 16.7% | 48 | 43.0% | 20 | $70,228 | 37 | 20.2% | 31 | 37.0 | 36 |
| Monrovia | 14.8% | 44 | 47.1% | 52 | $64,342 | 51 | 26.8% | 48 | 37.0 | 37 |
| Santa Clarita | 13.1% | 37 | 48.5% | 61 | $82,602 | 21 | 19.7% | 30 | 37.2 | 38 |
| La Verne | 10.2% | 30 | 43.4% | 27 | $74,686 | 31 | 17.1% | 22 | 37.2 | 39 |
| Temple City | 13.7% | 39 | 43.9% | 29 | $65,524 | 48 | 21.5% | 34 | 37.2 | 40 |
| Rowland Heights | 15.1% | 45 | 51.3% | 79 | $65,417 | 49 | 29.5% | 55 | 37.5 | 41 |
| La Mirada | 12.7% | 35 | 42.6% | 18 | $81,736 | 22 | 17.5% | 24 | 37.7 | 42 |
| East La Mirada | 13.8% | 40 | 44.0% | 30 | $74,647 | 32 | 20.4% | 32 | 37.9 | 43 |
| Altadena | 14.0% | 41 | 45.7% | 41 | $79,923 | 25 | 22.1% | 36 | 37.9 | 44 |
| East San Gabriel | 14.7% | 43 | 41.3% | 13 | $67,399 | 42 | 23.4% | 39 | 38.1 | 45 |
| Pasadena | 15.5% | 46 | 48.5% | 62 | $62,242 | 56 | 33.6% | 69 | 38.8 | 46 |
| West Carson | 17.9% | 53 | 35.1% | 2 | $67,954 | 41 | 19.5% | 29 | 39.7 | 47 |
| LA City Council District 3 | 17.2% | 49 | 44.6% | 33 | $76,216 | 29 | 28.2% | 50 | 40.9 | 48 |
| Glendale | 15.6% | 47 | 56.3% | 101 | $54,163 | 69 | 31.0% | 59 | 41.1 | 49 |
| Whittier | 17.6% | 52 | 45.9% | 42 | $64,973 | 50 | 25.8% | 46 | 42.1 | 50 |
| LA City Council District 2 | 18.1% | 54 | 48.9% | 66 | $56,910 | 63 | 33.1% | 63 | 42.8 | 51 |
| Charter Oak | 17.5% | 51 | 46.2% | 46 | $70,504 | 36 | 25.0% | 44 | 43.4 | 52 |
| Alhambra | 20.9% | 60 | 48.7% | 63 | $52,296 | 71 | 30.8% | 58 | 44.1 | 53 |
| West Covina | 18.1% | 55 | 51.0% | 77 | $66,589 | 45 | 26.1% | 47 | 44.4 | 54 |
| Quartz Hill | 14.5% | 42 | 43.2% | 23 | $63,873 | 52 | 35.8% | 70 | 45.1 | 55 |
| San Gabriel | 22.8% | 63 | 50.5% | 75 | $55,326 | 66 | 33.2% | 64 | 45.1 | 56 |
| Duarte | 19.9% | 57 | 48.3% | 58 | $59,776 | 58 | 27.7% | 49 | 45.7 | 57 |
| Monterey Park | 24.5% | 65 | 46.0% | 43 | $52,209 | 73 | 33.2% | 65 | 46.1 | 58 |
| Carson | 21.0% | 61 | 43.4% | 26 | $68,818 | 39 | 25.6% | 45 | 46.1 | 59 |
| Covina | 17.4% | 50 | 46.0% | 44 | $63,747 | 54 | 24.3% | 43 | 47.0 | 60 |
| Artesia | 20.8% | 59 | 56.1% | 98 | $49,569 | 83 | 33.4% | 67 | 47.7 | 61 |
| Gardena | 19.4% | 56 | 52.4% | 85 | $45,901 | 90 | 38.5% | 74 | 50.2 | 62 |

## Table 1. Key Social and Economic Indicators, by City and Community, ranked by Hardship. Los Angeles County, 2005-2009

| City/Community | <HS Education | | Housing Burden | | MHI | | <200% FPL | | Hardship | |
|---|---|---|---|---|---|---|---|---|---|---|
| | % | Rank | % | Rank | $ | Rank | % | Rank | Index | Rank |
| Bellflower | 24.5% | 66 | 51.5% | 81 | $50,544 | 77 | 38.4% | 73 | 50.4 | 63 |
| Downey | 24.3% | 64 | 50.0% | 73 | $58,128 | 61 | 29.2% | 54 | 51.0 | 64 |
| Vincent | 27.1% | 71 | 43.9% | 28 | $68,042 | 40 | 30.4% | 57 | 51.3 | 65 |
| Valinda | 38.2% | 88 | 53.2% | 90 | $56,621 | 64 | 37.6% | 71 | 51.4 | 66 |
| Pico Rivera | 35.5% | 83 | 44.6% | 34 | $58,179 | 60 | 31.2% | 60 | 52.0 | 67 |
| Long Beach | 21.7% | 62 | 51.7% | 82 | $50,040 | 79 | 40.8% | 76 | 52.1 | 68 |
| Santa Fe Springs | 26.4% | 68 | 53.5% | 93 | $55,057 | 67 | 28.8% | 52 | 52.2 | 69 |
| Avocado Heights | 32.8% | 79 | 43.0% | 21 | $65,767 | 47 | 28.3% | 51 | 52.5 | 70 |
| Azusa | 26.9% | 70 | 51.7% | 83 | $52,276 | 72 | 39.3% | 75 | 52.5 | 71 |
| Hawthorne | 25.4% | 67 | 54.0% | 94 | $44,052 | 92 | 41.4% | 78 | 53.0 | 72 |
| West Whittier-Los Nietos | 31.0% | 77 | 47.1% | 53 | $57,853 | 62 | 29.1% | 53 | 53.0 | 73 |
| Lawndale | 28.0% | 72 | 56.1% | 97 | $46,459 | 88 | 45.0% | 84 | 54.7 | 74 |
| Norwalk | 28.4% | 73 | 49.0% | 67 | $59,070 | 59 | 32.6% | 62 | 54.7 | 75 |
| South Whittier | 33.6% | 82 | 48.4% | 60 | $63,760 | 53 | 31.7% | 61 | 54.8 | 76 |
| Lancaster | 20.4% | 58 | 51.2% | 78 | $49,567 | 84 | 40.9% | 77 | 55.1 | 77 |
| Inglewood | 28.8% | 74 | 56.8% | 106 | $42,235 | 97 | 46.1% | 88 | 56.1 | 78 |
| Rosemead | 38.3% | 89 | 52.2% | 84 | $45,902 | 89 | 44.3% | 83 | 56.2 | 79 |
| Montebello | 29.7% | 76 | 46.4% | 48 | $51,449 | 74 | 38.0% | 72 | 56.4 | 80 |
| Citrus | 33.2% | 80 | 49.9% | 71 | $66,838 | 44 | 33.5% | 68 | 56.4 | 81 |
| La Puente | 40.6% | 94 | 52.8% | 88 | $49,729 | 81 | 43.5% | 81 | 57.6 | 82 |
| Palmdale | 26.7% | 69 | 56.0% | 96 | $54,840 | 68 | 43.0% | 80 | 57.9 | 83 |
| LA City Council District 10 | 28.8% | 75 | 49.2% | 68 | $38,966 | 103 | 50.9% | 97 | 58.0 | 84 |
| South San Jose Hills | 50.6% | 106 | 50.0% | 74 | $51,121 | 75 | 48.0% | 90 | 58.2 | 85 |
| LA City Council District 13 | 31.7% | 78 | 47.9% | 56 | $37,232 | 107 | 52.1% | 98 | 60.1 | 86 |
| West Puente Valley | 40.3% | 93 | 45.3% | 37 | $60,290 | 57 | 42.4% | 79 | 61.0 | 87 |
| LA City Council District 14 | 37.2% | 87 | 45.5% | 40 | $43,665 | 93 | 50.2% | 95 | 61.2 | 88 |
| Hawaiian Gardens | 45.1% | 99 | 57.7% | 111 | $46,462 | 87 | 50.0% | 93 | 62.3 | 89 |
| LA City Council District 15 | 33.4% | 81 | 47.7% | 55 | $45,084 | 91 | 49.7% | 92 | 63.0 | 90 |
| Pomona | 37.0% | 85 | 56.2% | 99 | $49,661 | 82 | 46.0% | 87 | 63.0 | 91 |
| LA City Council District 6 | 38.7% | 91 | 53.0% | 89 | $19,284 | 117 | 49.5% | 91 | 63.2 | 92 |
| Baldwin Park | 43.2% | 97 | 53.3% | 92 | $50,732 | 76 | 45.7% | 86 | 64.2 | 93 |
| LA City Council District 7 | 43.2% | 98 | 50.0% | 72 | $52,426 | 70 | 47.3% | 89 | 65.0 | 94 |
| Paramount | 42.2% | 95 | 56.6% | 103 | $42,588 | 95 | 52.1% | 99 | 66.7 | 95 |
| Commerce | 47.1% | 102 | 47.2% | 54 | $49,500 | 85 | 44.2% | 82 | 67.1 | 96 |
| South El Monte | 49.1% | 104 | 50.7% | 76 | $40,456 | 101 | 54.3% | 101 | 67.5 | 97 |
| LA City Council District 8 | 35.9% | 84 | 45.4% | 39 | $32,329 | 113 | 56.8% | 107 | 68.2 | 98 |
| El Monte | 46.0% | 100 | 58.1% | 113 | $41,948 | 98 | 54.6% | 104 | 69.8 | 99 |
| San Fernando | 46.7% | 101 | 56.2% | 100 | $50,230 | 78 | 45.5% | 85 | 69.8 | 100 |
| South Gate | 50.6% | 107 | 53.3% | 91 | $42,556 | 96 | 50.0% | 94 | 70.2 | 101 |
| Bell | 55.8% | 110 | 56.5% | 102 | $37,731 | 106 | 55.6% | 106 | 71.1 | 102 |
| Lake Los Angeles | 38.3% | 90 | 48.8% | 64 | $49,923 | 80 | 50.3% | 96 | 72.7 | 103 |
| Lynwood | 50.2% | 105 | 57.0% | 108 | $42,649 | 94 | 53.6% | 100 | 74.3 | 104 |
| Huntington Park | 54.9% | 108 | 57.7% | 110 | $35,340 | 110 | 61.4% | 113 | 75.4 | 105 |
| Westmont | 37.1% | 86 | 64.7% | 117 | $32,058 | 114 | 54.4% | 102 | 75.7 | 106 |
| Compton | 40.1% | 92 | 57.0% | 107 | $41,890 | 99 | 54.4% | 103 | 75.7 | 107 |
| Bell Gardens | 57.2% | 115 | 56.8% | 105 | $38,591 | 104 | 58.5% | 110 | 77.0 | 108 |
| East Los Angeles | 57.1% | 114 | 51.4% | 80 | $35,645 | 109 | 59.8% | 112 | 77.2 | 109 |
| LA City Council District 1 | 48.7% | 103 | 46.2% | 45 | $29,825 | 115 | 65.8% | 116 | 77.7 | 110 |
| Lennox | 55.0% | 109 | 60.8% | 116 | $35,785 | 108 | 61.7% | 114 | 78.0 | 111 |
| Maywood | 56.2% | 111 | 58.3% | 114 | $37,974 | 105 | 58.1% | 109 | 78.3 | 112 |
| Cudahy | 58.5% | 116 | 52.8% | 87 | $41,783 | 100 | 55.3% | 105 | 78.5 | 113 |
| Walnut Park | 56.9% | 113 | 57.5% | 109 | $38,998 | 102 | 57.0% | 108 | 79.2 | 114 |
| Willowbrook | 42.2% | 96 | 58.1% | 112 | $33,708 | 112 | 59.3% | 111 | 80.9 | 115 |
| Florence-Graham | 61.0% | 117 | 59.6% | 115 | $34,463 | 111 | 63.4% | 115 | 82.8 | 116 |
| LA City Council District 9 | 56.5% | 112 | 48.3% | 59 | $28,212 | 116 | 69.4% | 117 | 83.8 | 117 |

**Notes:** MHI = Median Household Income in last 12 months (in 2009 inflation-adjusted dollars)

HS Education = Percent of persons with less than high school diploma for population 25 years and older

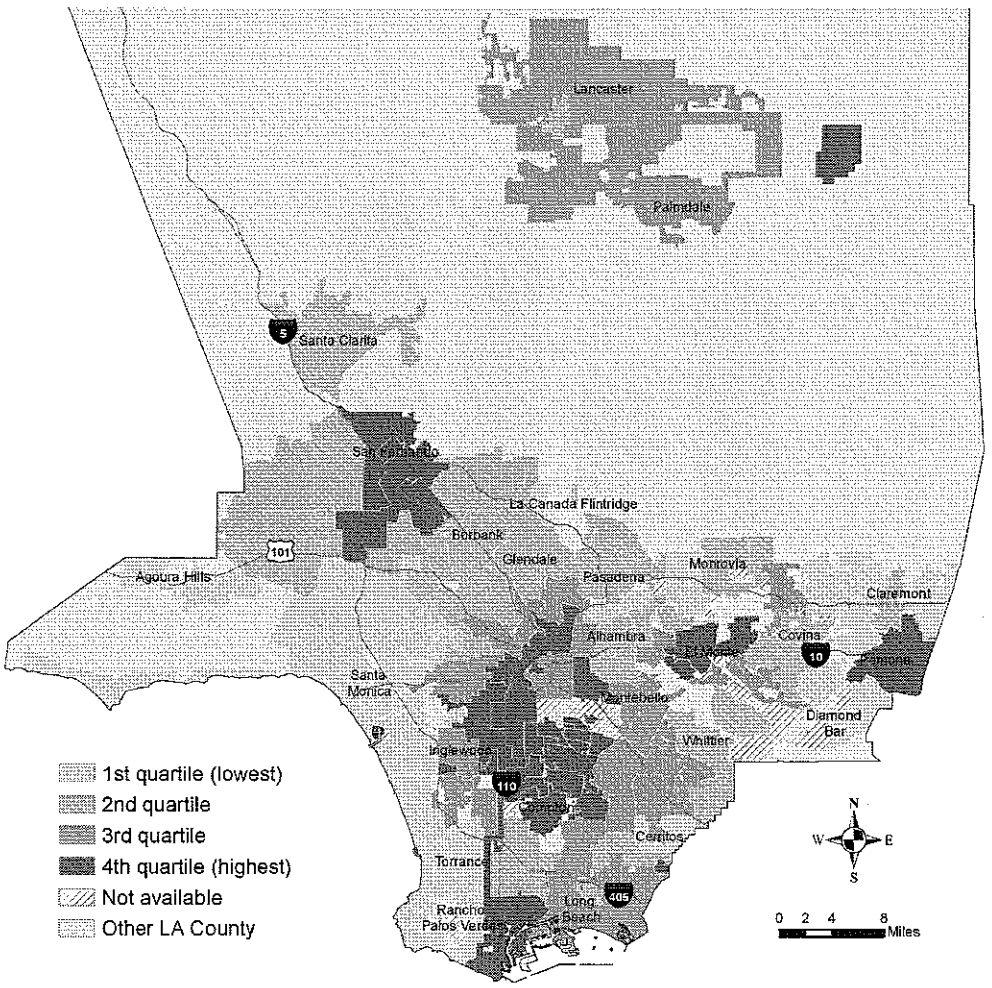
200% FPL = Percent of persons less than 200% of Federal Poverty Level

Housing Burden = Percent of households paying ≥ 30% of income on monthly housing costs

Hardship = Economic Hardship Index

Source: U.S. Census Bureau, 2005-2009 5-Year American Community Survey; for LA City Council Districts the MHI estimate is an average of median household incomes and margins of error.

## Map 1. Economic Hardship Index by City/Community, Los Angeles County, 2005-2009




Most of these indicators vary considerably according to race/ethnicity across the LA County population. For example, poverty status (Chart 2) is more than twice as high among Blacks (20.5%) and Hispanics (20.2%) as among non-Hispanic Whites (8.2%), and Asians have only a slightly higher rate than Whites (10.7%). Having less than a high-school education (Chart 3) varies even more by race/ethnicity, with rates among Hispanics more than three times those among Blacks and Asians, which are, in turn, about 50% higher than among non-Hispanic Whites. Variation in median household income across race/ethnicity (Chart 4) is somewhat less stark but still considerable with non-Hispanic white households having 75% higher median income than Black, 61% higher than Hispanic, 21% higher than Pacific Islander and 11% higher than Asian households, respectively.

The geographic variation by city and community on all of the indicators is even larger. The Florence-Graham community near South LA has more than 40 times as great a proportion of its residents without a high school education as Hermosa Beach (61.0% vs. 1.4%). Households in Palos Verdes Estates have only about half the housing-cost burden on their incomes as households in Westmont (33.4% vs. 65.0%). The actual impact of this gap is even larger because more affluent households may still have considerable income left after paying a large share for housing costs whereas families below the poverty line or Self-Sufficiency Standard do not.

**Chart 2. Percent of Persons Below Poverty Level by Race/Ethnicity, Los Angeles County, 2005-2009**

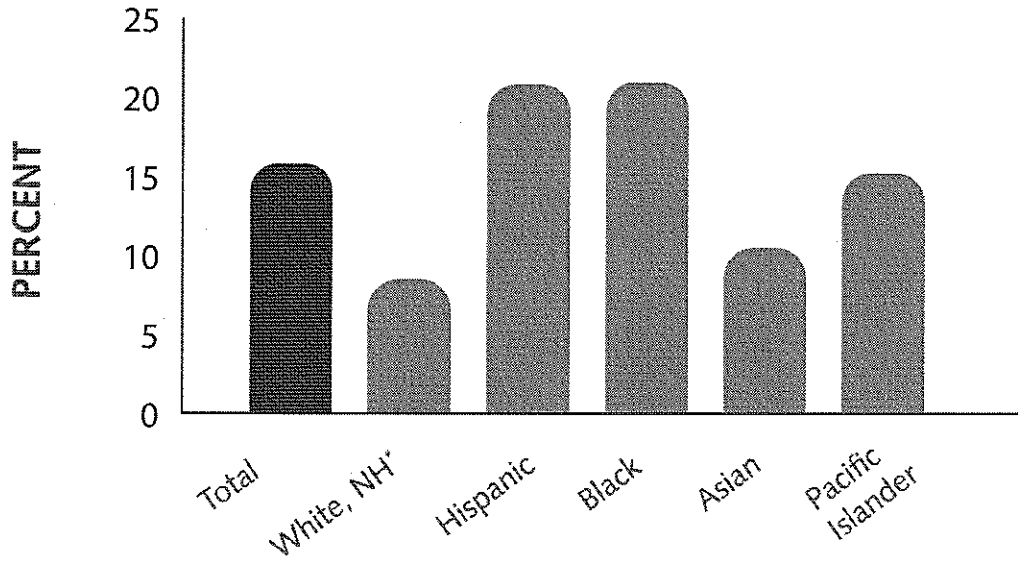
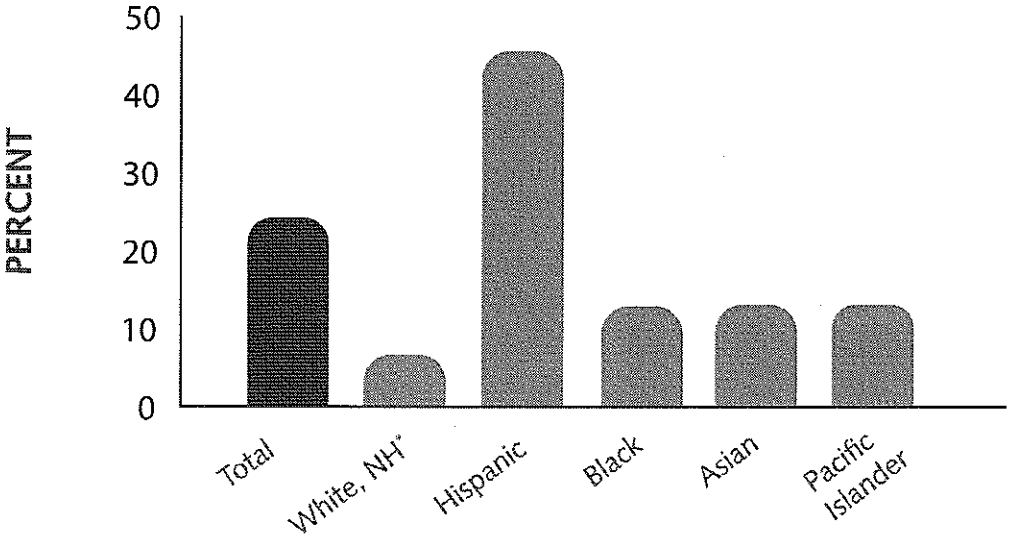
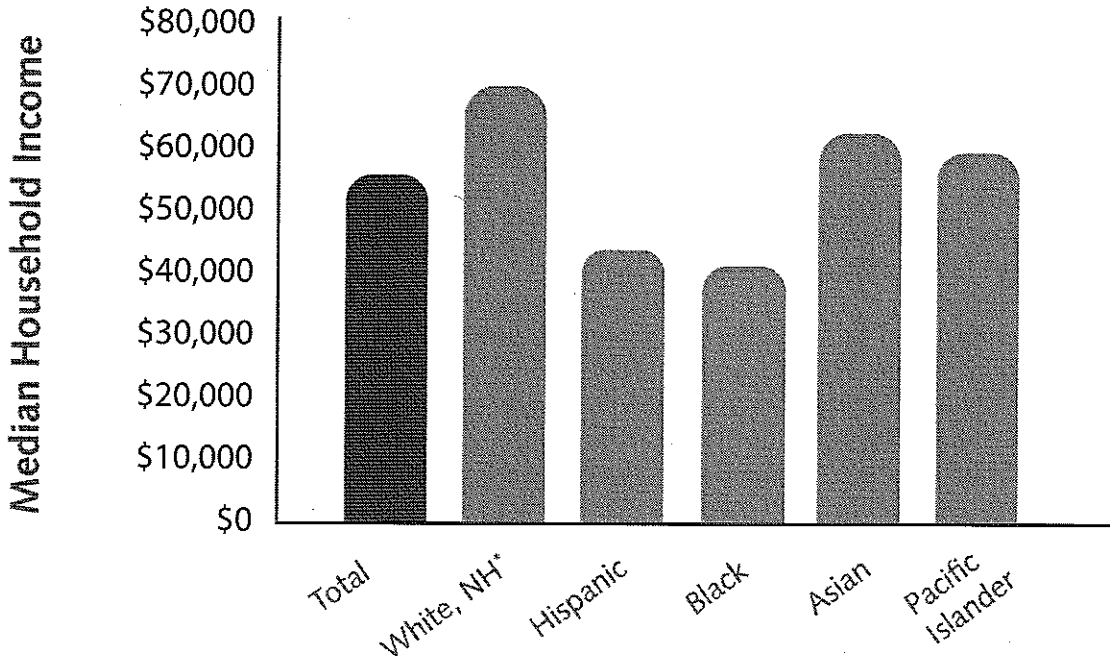



**Chart 3. Percent of Persons with Less Than High-School Education by Race/Ethnicity, Los Angeles County, 2005-2009**




* White, Non-Hispanic

**Chart 4. Median Household Income by Race/Ethnicity, Los Angeles County, 2005-2009**




* White, Non-Hispanic

Palos Verdes Estates also has the highest median household income, $170,068, more than eight times that for LA City Council District 6 at $19,284. Palos Verdes Estates also has only 1/20th as many households below the Self-Sufficiency Standard as LA City Council District 9 (3.4% compared to 69.4%).

These large gaps are not simply driven by a few very burdened or very privileged cities and communities or outliers. The gap in lack of completion of high school is 12.5-fold between the 10th percentile city/community (Redondo Beach, 3.9%) and the 90th percentile (Lynwood, 50.2%) and more than five-fold between 20th and 80th percentiles (San Dimas, 7.9% and La Puente, 40.6%, respectively).

There is a general geographic clustering of burdened communities as well (Map 1). The more burdened cities and communities tend to be in the southern and eastern areas of the County plus the northeast San Fernando Valley and Antelope Valley while the least burdened tend to be in the western and foothill areas. This clustering of burdened communities can add additional burden on residents by requiring farther travel to access health care, community services, better schools, grocery stores and recreational opportunities.

## Additional Examples of Communities Taking Action

**Alameda County, CA**

Alameda County is part of the Bay Area Regional Health Inequities Initiative (BARHII), which brings local health departments together "to transform public health practice for the purpose of eliminating health inequities using a broad spectrum of approaches that create healthy communities."

The Building Blocks Collaborative (BBC), convened by the county Public Health Department, is a partnership of organizations committed to changing the way their organizations work, individually and collectively, to create equitable community conditions for improved overall well-being for the people who live in them, from before birth throughout all stages of life. The initial strategy is to leverage the partnerships, resources and networks of this collaborative to achieve goals in three areas: healthy food, healthy economy, and healthy youth and families. The health department obtained outside funding to jumpstart concrete projects in each area. The Prosperity Project, for instance, the first step in the "healthy economy" area, aims to advance system and policy changes in Alameda County that will protect income and build wealth in low-income communities impacted by health inequities, such as by increasing uptake of all available income-supplement programs and increasing access to non-predatory, low-cost financial products. The public health department regards the BBC as one component of its commitment to a 15-year initiative to improve the social environment for health across the life course, recognizing that the scale of changes needed requires focused, accountable effort across many years.[24]

**Seattle – King County, WA**

The King County Equity and Social Justice Initiative was launched in 2008 by the county government. The goal is for all county residents to live in communities of opportunity where all people thrive. Ensuring opportunity for all means eliminating long-standing and persistent inequities and social injustices.

The initiative focuses on 13 social, economic and physical environment factors identified as the main determinants of equity and health. The county intends to measure how its service delivery, decisions, policies and means of engaging communities impact equity in each of these 13 areas and monitor the impact of changes wrought by the initiative. The initiative is overseen and held accountable by an interdepartmental Equity and Justice Team, facilitated by the public health department, which includes high-level representation from all executive departments in county government. Initial steps included developing assessment and change-planning tools to be used by all departments, extensive training and mobilization for county staff, and widespread community engagement and mobilization. One key aim is to develop new community partnerships by engaging community groups most impacted by inequities as well as groups that hold institutional power, supporting capacity building of local organizations and communities, and supporting community-based planning and social justice activities that contribute to healthy communities.[25]

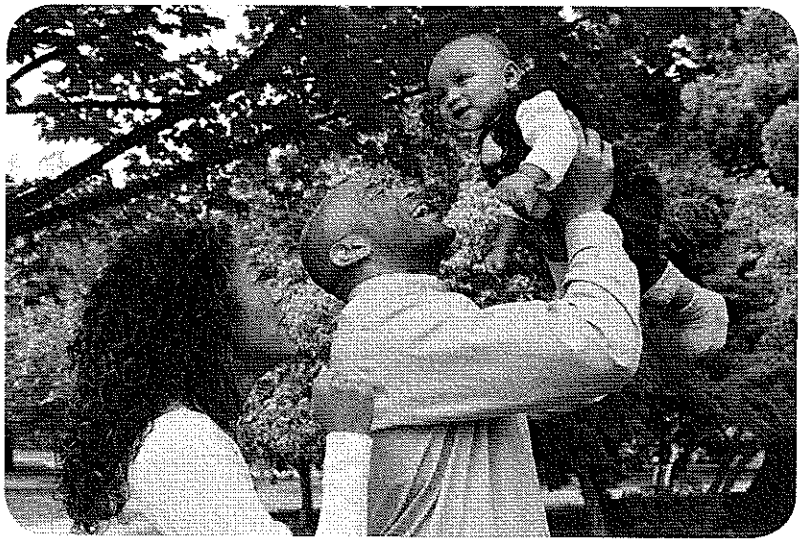
# Discussion

The vision of the LA County Department of Public Health is "Healthy people in healthy communities." Recent department reports on life expectancy, obesity, diabetes and general health status have shown that many people in LA County are not healthy and many live in communities where health outcomes are comparatively poor. This report highlights similarly great disparities in social and economic resources and burdens across cities and communities. To a large degree, the social and economic burden of our communities is directly correlated with lower life expectancy and higher prevalence of preventable disease and disability.

Though LA County has considerable wealth, great educational institutions, lovely homes, and many good jobs, these strengths and resources are not equally available to all who reside within its boundaries. LA County's poverty rate, adjusted for cost of living, is higher than any other county in the state. LA County has many highly educated people and communities but also one of the highest proportions of people without a high-school education of any metropolitan area in the United States. LA County has one of the highest levels of economic hardship among the 80 largest metropolitan areas in the U.S. and it is getting worse. The hardship index for Los Angeles showed the third most severe worsening trend (1970 through 2007) among all cities in the nation.[18]

The social and economic burdens of poor education, lack of affordable housing and less than self-sufficient income affect not just those individuals and families who have the fewest resources, but all of our communities. The social gradient means that not only do those in the bottom stratum have worse health outcomes than those in the top stratum, but those in the middle also have less than optimal health. The higher rates of disease and disability and lesser productivity among many communities means a higher public and private burden on more resourced communities. Unhealthy physical environments across the region adversely affect everyone, even though they are likely to be most concentrated in more burdened communities which also have less social power to change those environments.

Improving the overall social and economic status of LA County residents would have a substantial payoff in improved health and longevity, while also increasing economic productivity. Take two of the key indicators presented in this report, education and poverty levels, and compare them to other counties in California. If LA County had the same levels of educational attainment as top-ranked Marin County, more than 8,616 premature deaths (deaths before age 65) per year would be averted, 32% of the total.[19] If the income and poverty level were the same as Marin County's, 4,571 premature deaths would not happen, 17% of the total. Together, changing just these two factors has the potential to prevent a substantial proportion of the premature deaths in LA County, and the gains would come in middle-class as well as poorer populations.



# Recommendations

Changing these deeply rooted determinants of health for the better is a huge and complex undertaking that can be daunting. The challenge goes far beyond the traditional role of a public health department, a health care system or any one governmental agency or private sector. Much as the Affordable Care Act recognizes the importance of these determinants for improving health and establishes mechanism for addressing them, the department also believes that through increasing awareness and refocusing efforts to improve community health with a "social determinants lens," our department can help build, support and lead partnerships that can make a considerable difference.

A promising start is to agree that a healthy LA County depends on assuring that everyone in every community has:

- A good education, including training for evolving job markets
- A healthy start to life - support for healthy pregnancy and birth, good nutrition, safe housing and early childhood development programs
- Adequate, affordable and safe housing
- Opportunity for a meaningful job with a living wage
- Community safety, opportunities for social and civic engagement and freedom from discrimination and injustice.

How can we move toward realizing these basic conditions for having healthy individuals in healthy communities? Some approaches that our own and other public health departments have initiated include:

- Educating ourselves and our larger community about the powerful effects of social determinants on health and potential action strategies
- Working with LA County residents on local initiatives and building partnerships to address root causes of health inequities and to create social conditions for health
- Collaborating with governmental and non-governmental organizations that have major responsibility for these social determinants
- Addressing local, state and national policies that impact social determinants of health, partnering with other governmental agencies, community organizations and the private sector
- Supporting and monitoring this new focus with data and research
- Ensuring that all existing public health programs and services embody this social determinants framework.

## Tools for Change: Health in All Policies Approach and Health Impact Assessments

Laws and other public policies that impact social determinants do not exist in a vacuum. Action taken in one domain may have unintended, undesired consequences in another and may also have synergistic, positive effects in other areas. For instance, decisions about transportation, energy, housing, employment and education affect health outcomes positively, negatively, or both.

A relatively new approach to view these interconnected public and private policies through a health lens, both to avoid potentially negative effects and to proactively seek to promote healthy outcomes, is called "Health in All Policies" (HiAP).

## Collecting and Using Data to Motivate Action
An Example from the Antelope Valley, CA

**Infant mortality is a key measure of a community's health and there are often disparities in infant mortality rates within a community by race, ethnicity or economic status. Careful examination of these disparities can help a community to ameliorate or even directly change some of these social determinants and thus improve health outcomes.**

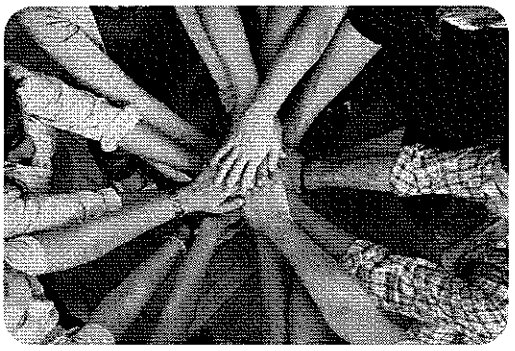
A 2003 LA County Department of Public Health report revealed very high rates of infant mortality in the Antelope Valley (AV) and particularly among African Americans. A more detailed department analysis helped the community understand both the sharp rise and the disparity. AV stakeholders saw that a much lower rate actually prevailed elsewhere in LA County, the basis for realistic and attainable goals.

The Los Angeles Mommy and Baby Survey, or LAMB, helped dig deeper into causes and potential areas for intervention, clearly pointing to women's health prior to pregnancy and quality of and access to prenatal care as key factors. Underlying causes identified included lack of social support networks for women who had lost infants previously, lack of transportation to prenatal care, not having health insurance even when eligible, and perceived discriminatory or insensitive treatment by care providers.

Together, the department and community stakeholders reviewed evidence on the effectiveness of potential interventions to address key problems and implemented action strategies including 1) increasing capacity and targeted access to high-risk family support programs for African American women and their families; 2) increasing the number of women and infants who have medical insurance; 3) collaborating with and educating local health care providers to ensure responsive and high-quality care for African American women and their infants; 4) conducting an education and outreach marketing campaign regarding healthy life practices; and 5) continuing to conduct research on infant mortality in the AV.

Since these strategies were implemented, the infant mortality rate among African Americans in the AV dropped from a peak of 32.7 deaths per 1,000 live births in 2002 to 16 per 1,000 in 2003 and less than 10 per 1,000 in 2005. This rate is still too high, and significantly higher than in other racial/ethnic groups in the AV, but both the disparity and the overall infant mortality in the AV has been reduced. The LAMB study and many of the particular programmatic interventions have been extended Countywide and shared with other localities across the nation.[23]

## What Is HiAP?



- A coordinated, multi-sectoral approach to building healthier communities through collaborative action by public service agencies working across their portfolio boundaries and engaging a wide variety of community stakeholders.[20]
- Recognizes that health and prevention are impacted by policies that are managed by non-health governmental and non-governmental entities.[21]
- Provides ways to communicate with and influence non-health sectors of government, the private sector and civil society to explore, understand and embrace their ability to influence the population's health.
- Uses tools like periodic measurement and publicity of health determinants and social indicators; health impact assessments; and other analyses of the health consequences of proposed laws, policies or development; area-wide health councils to coordinate cross-sectoral efforts in specific key areas of building healthier, equitable communities.

## Benefits of HiAP

Intersectoral strategies that improve health can also help to meet the policy objectives of other agencies and sectors. For example, well-performing public education systems, rational transportation, increased affordable housing and reduced air and water pollution are goals of other agencies that to the degree they are met will enhance population health. Collaboration and coordination across governmental agencies can create synergies that are imperative in an era of strained public resources. Community-based organizations, advocacy groups and cities can use the "health lens" of HiAP to create popular support for policy changes that create conditions for healthier communities. Ultimately healthier individuals and communities lead to a stronger economy and sustainable economic growth across LA County, the state and nation.

## Using Data to Implement HiAP, Encourage Collaboration and Mobilize Communities

Measuring indicators and analyzing data can help begin the process of change by bringing attention and awareness and by highlighting domains and communities where unequal opportunities and disadvantage are most severe and consequential. There is also considerable room to improve the health of almost everyone in our County, not only those with the greatest hardships, by improving the social environment for health. Healthier communities are also more economically productive and place a smaller burden on social resources to provide care and treatment for preventable disease and disability.

Detailed data on a particular targeted area can help develop strategies for action and establish benchmarks to assess progress and impact. Periodic measurement of indicators can facilitate mutual accountability among the stakeholders and contribute evidence for decisions about the need to change, add or intensify strategic actions.

## Health Impact Assessment

Health impact assessment is a tool to understand and quantify the health consequences of a policy or other social and environmental change. It does this by using the best available methods to assess the potential health impacts, positive and negative, and suggesting ways to mitigate potential harms or augment potential benefits. Physical project health impact assessments routinely involve stakeholders in the process. Health impact assessments are helpful in educating decision makers about health impacts, so they can be better informed in shaping and in their deliberations regarding policies, programs or projects.[22]

# A More Promising Scenario

In the "One Path" Scenario at the beginning of this report, a low birth weight infant is born and follows a downward life trajectory influenced by multiple complex factors, including disparities in social and economic determinants of health. Read the following scenario, "A Better Path," which illustrates a much different outcome than the first scenario as a result of better social and economic environments:

### A Better Path

A 22-year-old new mother is discharged from the hospital after delivering her baby, the full-term product of a planned pregnancy. Unplanned pregnancies in her community have dropped to historic lows since the health department demonstrated the impact of the high rate of teenage pregnancies on the health and well being of young mothers and their offspring. In association with the public school system, effective sexuality education interventions have been implemented, and all high-school students have access to school-based clinics and reproductive health services. Her family took advantage of the SNAP food stamp program, which had added incentives for the purchase of fruits and vegetables. Collaboration among social services, law enforcement and public health reduced street violence and substance abuse to low levels.

This young woman received early prenatal care through a medical care system that guaranteed universal insurance. Although there were no local providers in her neighborhood, expanded bus service enabled her to visit a physician in the central city. Over the past decade, with grassroots and community participation, new bus lines were created, sidewalks added, and of several empty lots replaced by a new park and adjacent community garden all of which have increased physical activity by. The local public health agency successfully engaged local transportation and public works to implement these features, and community groups and local business raised funds to help support these efforts.

With early prenatal care, this young mother knew to avoid secondhand smoke – but there was less of that around these days because smoking rates have decreased markedly in part due to a new ordinance banning smoking in multi-unit dwellings. She also ate well during her pregnancy. Her main meal of the day was at the cafeteria at the public university where she is a part-time student (her legislators have reallocated the state budget to increase funding for higher education, having been convinced that education increased healthy years of life and decreased utilization of medical care) and it serves fresh fruits and vegetables and non-processed foods. Fast-food restaurants have even been eliminated from the campus. Although she still enjoys fast food at the restaurant where she works part-time, the salt content of these foods has dropped an average of 80 percent throughout the industry, and fried foods have been largely replaced by grilled and baked choices. Public health efforts to educate the food industry and the wider public on the harms of salt have increased public demand for lower-sodium products. In addition to public demand and greater FDA and USDA oversight, board members of the companies that make processed food supported these policies to reduce rising employee health care costs and absenteeism due to hypertension-related illness.

Along with her now-vibrant community, good prenatal care, improved nutrition and increased physical exercise, enabled her to avoid pre-eclampsia. She had mild pregnancy-related hypertension that was well-controlled, and she had an uncomplicated labor and delivery. Because the hospital was "baby friendly," she was taught the benefits of breastfeeding and was able to start breastfeeding her son at birth. Her expanded social network of friends encouraged her to delay her next pregnancy for several years and accessible, affordable child care will allow her to complete her education. This breastfed infant will have increased protection from infectious illness, a healthy start to life, and will grow up in a supportive healthful community.

# Conclusion

Social determinants contribute to the overall health of Los Angeles County as well as disparities in health. This is the first in a series of publications designed to highlight their importance and the steps we can take to improve them. Creating healthier and more prosperous communities for all residents of Los Angeles County can only be achieved through active multi-sectoral partnerships and collective action. We invite you to join us and others in this effort.

# Helpful Online Resources

**For more information about the social determinants of health framework:**

Social Determinants of Health - Key Concepts: World Health Organization (WHO)
http://www.who.int/social_determinants/thecommission/finalreport/key_concepts/en/index.html

Social Determinants of Health: Frequently Asked Questions (FAQs): U.S. Centers for Disease Control and Prevention (CDC) http://www.cdc.gov/socialdeterminants/FAQ.html

Unnatural Causes: Is Inequality Making Us Sick?
http://www.unnaturalcauses.org/

**Examples and recommendations from public health departments:**

Health in All Policies Task Force: Report to the [California] Strategic Growth Council
http://www.sgc.ca.gov/hiap/

What Is Social and Health Equity and Why Is It Important?
Alameda County Public Health Department [website with reports and program information]
http://www.acphd.org/social-and-health-equity.aspx

Community Partnerships for Health – Seattle King County Public Health
http://www.kingcounty.gov/healthservices/health/partnerships/sphc/projects.aspx

# References


1. Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020, *Healthy People 2020: An Opportunity to Address Societal Determinants of Health in the United States*, Washington, D.C. July 26, 2010.
2. United Nations, Department of Economic and Social Affairs, Population Division. *World Population Prospects*: The 2010 Revision. New York, NY. 28 June 2011. http://esa.un.org/unpd/wpp/Documentation/publications.htm. Accessed January 3, 2012.
3. Ratcliffe C and McKernan S-M, *Childhood Poverty Persistence: Facts and Consequences*. Washington, D.C. The Urban Institute, Brief 14, June 2010.
4. CDC. Achievements in Public Health, 1900-1999: Changes in the Public Health System. MMWR. 1999;48(50):1141-7.
5. CDC. Ten Great Public Health Achievements — United States, 1900–1999. MMWR. 1999;48(12):241-243.
6. Cutler DM, Rosen AB, Vijan S. The value of medical spending in the United States. 1960–2000. *N Engl J Med* 2006;355:920-7.
7. Institute of Medicine. *The Future of the Public's Health in the 21st Century*. Washington, DC: National Academies Press. 2002.
8. Booske, BC, Athens JK, et al. *County Health Rankings Working Paper: Different Perspective for Assigning Weights to Determinants of Health*. Madison, WI. University of Wisconsin, Population Health Institute, February 2010. http://www.countyhealthrankings.org/sites/default/files/differentPerspectivesForAssigningWeightsToDeterminantsOfHealth.pdf, accessed January 3, 2012.
9. University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation, *County Health Rankings & Roadmaps*, 2011. http://www.countyhealthrankings.org/roadmaps/pacific-institute.
10. Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology, 2007 Los Angeles County Health Survey, prepared February 6, 2012.
11. Montiel LM, Nathan RP, Wright DJ. An update on urban hardship. Albany NY: The Nelson A. Rockefeller Institute of Government, August 2004.
12. D. Pearce with J. Brooks, The Self-Sufficiency Standard for California, (November 2000). Citro, Constance F. and Robert T. Michael, *Measuring Poverty: A New Approach*, National Academy Press, (Washington, DC, 1995).
13. U.S. Census Bureau, 2005-2009 American Community Survey. January 2011. Table M1501. Accessed September 4, 2011.
14. Mary Schwartz and Ellen Wilson, Who Can Afford To Live in a Home? A look at data from the 2006 American Community Survey, US Census Bureau. www.census.gov/hhes/www/housing/special-topics/.../who-can-afford.pdf. Accessed September 4, 2011.
15. Shasta County Health and Human Services Agency, Public Health. Shasta County College and Career Readiness Initiative. 2011. www.countyhealthrankings.org/roadmaps/shasta-county. *Armelino, T and Westover, J. Closing the Gaps of College and Career Readiness*, 2012. www.ctenorth.org. Shasta_County_College_Career_Readiness-InnovateED-1.pdf.
16. Public Policy Institute of California, Just the Facts: Poverty in California. March 2009. www.ppic.org. Accessed September 1, 2011.

17. http://ccisc.org/2011/08/safe-return-project-organizes-successful-action-to-move-richmond-forward-in-addressing-re-entry-population/. http://www.pacinst.org/topics/community_strategies/formerly_incarcerated/index.html.

18. Montiel LM and Wright DJ, *Sliding to the Trough: Urban Hardship Trends Before the Great Recession*, Albany NY: Nelson A Rockefeller Institute of Government, November, 2009.

19. County Health Calculator, Virginia Commonwealth University Center on Human Needs, March 20, 2011. http://chc.humanneeds.vcu.edu. Accessed September 6, 2011.

20. Kickbusch and Buckett, *Implementing Health in All Policies, Adelaide 2010*. Department of Health, Government of South Australia, 2010.

21. *Health in All Policies Task Force Report to the Strategic Growth Council Executive Summary*, Sacramento (CA): Health in All Policies Task Force, December 2010.

22. Cole BL, Shimkhada R, Fielding J, et al. Methodologies for Realizing the Potential of Health Impact Assessment. Am J Prev Med 2005;28(4):382–389.

23. Chao MC, Donatoni G, Hopson A, Davenport D, Harding CA. Narrowing the Infant Mortality Gap: Data Tools and Strategies for Improved Birth Outcomes. in Fielding JE, Teutsch, SM, eds., Caldwell S, Mging Ed. *Public Health Practice, What Works*. Oxford University Press, New York, 2012.

24. Alameda County Department of Public Health, Alameda County Building Blocks Collaborative. 2012. http://buildingblocksalamedacounty.wordpress.com/about-our-work/.

25. Office of King County Executive, Working Toward Fairness and Opportunity for All: King County Equity and Social Justice Initiative, 2012. www.kingcounty.gov/equity.

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